

Abstract

1 A SONET/SDH architecture is disclosed that enables the multiplexing of STS-1's from
2 different SONET/SDH rings into a single STS-N for transmission via a single optical fiber, but while
3 maintaining the association of each of the STS-1's with its respective SONET/SDH ring. For example,
4 when an STS-48 carries 12 STS-1's from a first SONET/SDH ring and 12 STS-1's from a second
5 SONET/SDH ring, the STS-48 carries: the automatic protection switching channel for the 12 STS-1's
6 from the first SONET/SDH ring (with addresses specified in the address space of the first
7 SONET/SDH ring); and the automatic protection switching channel for the 12 STS-1's from the
8 second SONET/SDH ring (with addresses specified in the address space of the second SONET/SDH
9 ring).